Class Account

package bankmanagementsystem2;

public class Account {

// properties

private String firstName;

private String lastName;

private int accid;

private double balance;

private int passcode;

// default constructor

public Account() {

}

// parameterized constructor

public Account(String firstName, String lastName, int id, double balance, int passcode) {

super();

this.firstName = firstName;

this.lastName = lastName;

this.accid = id;

this.balance = balance;

this.passcode = passcode;

}

// getters and setters

public String getFirstName() {

return firstName;

}

public void setFirstName(String firstName) {

this.firstName = firstName;

}

public String getLastName() {

return lastName;

}

public void setLastName(String lastName) {

this.lastName = lastName;

}

public int getAccid() {

return accid;

}

public void setAccid(int accid) {

this.accid = accid;

}

public double getBalance() {

return balance;

}

public void setBalance(double balance) {

this.balance = balance;

}

public int getPasscode() {

return passcode;

}

public void setPasscode(int passcode) {

this.passcode = passcode;

}

}

Class CreateAccount

package bankmanagementsystem2;

import java.util.ArrayList;

import java.util.Scanner;

public class CreateAccount {

public CreateAccount(Scanner scanner, int lastaccid, ArrayList<Account> accounts, Database database) {

System.out.println("Enter first name: ");

String firstName = scanner.next();

System.out.println("Enter last name: ");

String lastName = scanner.next();

System.out.println("Enter balance: ");

double balance = scanner.nextDouble();

//System.out.println("Choose the type of account you want to open.\n1. Current account\n2.Economy account");

//double accountOption = scanner.nextDouble();

System.out.println("Enter passcode (digits only) : ");

int passcode = scanner.nextInt();

System.out.println("Confirm passcode (digits only) : ");

int passcodeConf = scanner.nextInt();

if(passcode != passcodeConf) {

System.out.println("Codes don't match");

return; // adica executia se opreste daca nu e nimerit codul

}

int id = 1000000 + lastaccid; // numarul de cont porneste de la 1000000

lastaccid ++;

Account acc = new Account(firstName, lastName, id, balance, passcode); // se creaza un cont cu datele introduse de user

accounts.add(acc); // se adauga acest cont la lista de conturi

System.out.println("Your account id: " + id); // se afiseaza id-ul creat pt contul curent

new Menu(scanner, acc, database, accounts); // se afiseaza meniul cu optiunile existente pt contul nou creat

}

}

Class Database

package bankmanagementsystem2;

import java.io.BufferedReader;

import java.io.File;

import java.io.FileNotFoundException;

import java.io.FileReader;

import java.io.IOException;

import java.io.PrintWriter;

import java.util.ArrayList;

public class Database {

ArrayList<Account> accounts;

File file;

public Database() {

// se creaza fisierul Data in caz ca acesta nu exista deja

file = new File("Files/Data");

if( !file.exists() ) {

try {

file.createNewFile();

} catch(Exception e) {

e.printStackTrace();

};

}

}

public ArrayList<Account> getAccounts(){

String text ="";

try {

BufferedReader br = new BufferedReader(new FileReader(file));

String s;

while((s = br.readLine()) !=null ) {

text = text + s;

}

br.close();

} catch (FileNotFoundException e) {

e.printStackTrace();

}catch (IOException e) {

e.printStackTrace();

}

accounts = new ArrayList<>();

String[] array1 = text.split("<NewAccount/>");

for(String v : array1) {

if (!v.equals("")) {

String[] array2 = v.split("<A/>");

Account a = new Account();

a.setFirstName(array2[0]);

a.setLastName(array2[1]);

a.setAccid(Integer.parseInt(array2[2]));

a.setBalance(Double.parseDouble(array2[3]));

a.setPasscode(Integer.parseInt(array2[4]));

accounts.add(a);

}

}

return accounts;

}

public void saveAccounts() {

String text ="";

for(Account a : accounts) {

StringBuilder bd = new StringBuilder();

bd.append(a.getFirstName()).append("<A/>");

bd.append(a.getLastName()).append("<A/>");

bd.append(String.valueOf(a.getAccid())).append("<A/>");

bd.append(String.valueOf(a.getBalance())).append("<A/>");

bd.append(String.valueOf(a.getPasscode())).append("<A/>");

bd.append("<NewAccount/>/n");

text = text + bd.toString();

}

try {

PrintWriter pw = new PrintWriter(file);

pw.print(text);

pw.close();

} catch (FileNotFoundException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

}

Class Deposit

package bankmanagementsystem2;

import java.util.Scanner;

public class Deposit {

public Deposit(Scanner scanner, Account acc) {

System.***out***.println("Enter amount: ");

double amount = scanner.nextDouble();

acc.setBalance(acc.getBalance() + amount);

System.***out***.println("Operation done successfully");

}

}

Class Login

package bankmanagementsystem2;

import java.util.Scanner;

import java.util.ArrayList;

public class Login {

public Login(Scanner scanner, ArrayList<Account> accounts, Database database) {

System.out.println("Enter account id: ");

int id = scanner.nextInt();

System.out.println("Enter passcode:");

int passcode = scanner.nextInt();

Account account = new Account(); // se creaza un cont gol

boolean exist = false;

for(Account acc : accounts) {

if( acc.getAccid() == id && acc.getPasscode() == passcode)

exist = true;

account = acc;

} // se cauta contul in lista de conturi deja existente

if(exist) {

new Menu(scanner, account, database, accounts);

} else {

System.out.println("Account doesn't exist");

}

}

}

Class Main

package bankmanagementsystem2;

import java.util.Scanner;

import java.util.ArrayList;

public class Main {

static Scanner scanner;

static int lastaccid;

private static ArrayList<Account> accounts;

public static void main(String[] args) {

// TODO Auto-generated method stub

accounts = new ArrayList<>();

scanner = new Scanner(System.in);

Database database = new Database();

accounts = database.getAccounts();

lastaccid = accounts.size();

int i=0;

System.out.println("Welcome to bank management system ");

do {

System.out.println(" Please choose an option: ");

System.out.println("1. Create new account");

System.out.println("2. Login");

System.out.println("3. Exit");

i = scanner.nextInt();

switch(i) {

case 1: new CreateAccount(scanner, lastaccid, accounts, database);

break;

case 2: new Login(scanner, accounts, database);

break;

case 3:

System.out.println("Exiting now");

//scanner.close();

break;

default:

System.out.println("Please choose an option from the above, 1, 2 ore 3");

break;

}

}while(i!=3);

}

}

Class Menu

package bankmanagementsystem2;

import java.util.Scanner;

import java.util.ArrayList;

public class Menu {

public Menu(Scanner scanner, Account acc, Database database, ArrayList<Account> accounts) {

int j=0;

System.out.println("Welcome " + acc.getFirstName() + " "+ acc.getLastName());

do {

System.out.println("1. Deposit\n2. Withdraw\n3. Balance\n4. Exit");

j = scanner.nextInt();

switch(j) {

case 1:

new Deposit(scanner, acc);

break;

case 2:

new Withdraw(scanner, acc);

break;

case 3:

System.out.println("Your balance is: " + acc.getBalance());

break;

case 4:

database.saveAccounts(accounts);

System.out.println("Exiting now...");

//scanner.close();

break;

default:

System.out.println("Please choose an option from 1 to 4");

}

} while(j!=4);

}

}

Class Withdraw

package bankmanagementsystem2;

import java.util.Scanner;

public class Withdraw {

public Withdraw(Scanner scanner, Account acc) {

System.***out***.println("Enter amount: ");

double amount = scanner.nextDouble();

if(acc.getBalance() >= amount) {

acc.setBalance(acc.getBalance() - amount);

System.***out***.println("Operation done successfully");

} else

System.***out***.println("Not enough funds. Only " + acc.getBalance() + " available");

}

}